

IANNIS XENAKIS

JONCHAIES

pour

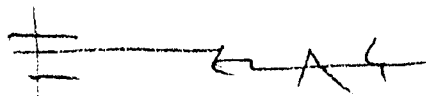
grand orchestre

EDITIONS SALABERT



for Henri K Strindberg

with my best wishes



Editions Salabert, 22 rue Chauchat
75009 Paris

Printed in France



824.55.60

JONCHAIES

POUR GRAND ORCHESTRE

Commande de Radio-France, à l'initiative de Claude Samuel

Le début de *Jonchaies* traite des «cibles» (échelles) de hauteurs d'une façon nouvelle et emploie une échelle non-octaviante spéciale, solution possible aux problèmes des structures hors-temps. Puis, plus loin, elles traitent des «cibles» du temps à l'aide de multiplicités de classes de timbres sur plusieurs niveaux, jouées par des sous-groupes de l'orchestre, et déterminant ainsi des plans de trajectoires qui s'enchevêtrent.

C'est une pièce qui s'inspire des résultats obtenus et utilisés dans la «Légende d'Eer», musique du Diatope du Centre Pompidou, laquelle avait été complétée au Studio de Musique Electronique de la Westdeutscher Rundfunk. Ces résultats sont issus de mes travaux théoriques sur la synthèse des sons et de la musique par ordinateur, travaux qui emploient une voie différente de celle de l'analyse harmonique classique de Fourier et que j'ai d'abord menés à Indiana University de Bloomington, puis au Centre d'Etudes de Mathématique et Automatique Musicales (CEMAMu) à Paris. Cette différence s'appuie sur des marches stochastiques et des mouvements Browniens. En effet, d'après cette théorie que j'ai introduite il y a douze ans, on part du bruit et, à l'aide de ces fonctions stochastiques, on y injecte des périodicités. (Cf. Iannis Xenakis, *Formalized Music*, page 242, Indiana University Press, Bloomington, Indiana, U. S. A., 1971, et Iannis Xenakis, *Arts / Sciences Alliances*, page 139, Casterman, Tournai, 1979).

La description poétique de Jacques Lonchampt, ci-après, donne une idée de la pièce.

IANNIS XENAKIS

.... Plus impressionnante encore était *JONCHAIES* (commande de Radio-France donnée en création mondiale), partition d'un accent si direct qu'elle pourrait devenir rapidement presque «classique». Un vaste glissando ultra-rapide à l'unisson monte aux cordes de l'extrême grave à l'extrême aigu, au milieu de grondements d'orage, puis se diversifie en longues lignes souples qui se superposent en un tissu d'une merveilleuse harmonie quasi tonale, vibrant avec une grande chaleur d'archet. Puis le décor change dans un curieux épisode accentué sur des contre-temps de foire que frappe orgueilleusement la grosse caisse.

Le mouvement s'accélère à nouveau, les flûtes sifflent, les violons crient, les cuivres rugissent, on passe du paroxysme à la douceur, les rythmes se démultiplient, se dérèglent, et toute cette musique vibre et gémit avec une sorte de plénitude de vie naturelle. Une cadence détonante de trombone solo réveille le mouvement un instant assoupi, déchainant les percussions, des tempêtes de cordes, des fanfares homériques, avant que tout ne s'achève doucement par des sonorités de clochettes et des sifflements d'oiseaux....

Jacques Lonchampt - *Le Monde* - 23 décembre 1977

La création mondiale de *Jonchaies* eut lieu à Paris par l'Orchestre National de France, placé sous la direction de Michel Tabachnik, au concert du 21 décembre 1977 en clôture du «CYCLE IANNIS XENAKIS», festival d'un mois consacré entièrement à sa musique, organisé par la «Recherche Artistique» en collaboration avec le Ministère de la Culture et de la Communication. Du 28 novembre au 21 décembre, ce cycle a présenté 12 concerts à Paris et 6 en province où ont été jouées 34 de ses œuvres pour orchestre, ensemble, soliste, et pour bande magnétique.

(Disque : *Jonchaies* + *Cendrées* + *Nomos Gamma* sur Erato STU 71513)

JONCHAIES

FOR LARGE ORCHESTRA

commissioned by Radio-France, at the initiative of Claude Samuel

The beginning of *Jonchaies* deals with pitch «sieves» (scales) in a new way and uses a special non-octaviating scale, one possible solution to the problems of outside-time structures. Then, further on, they treat in-time «sieves» by multiplicities of timbre classes on several levels, played by subgroups of the orchestra, thus determining the levels of intertwining trajectories.

This piece is inspired by the results obtained and used in the «Legend of Eer», music of the Diatope of the Centre Pompidou, which was completed in the Electronic Music Studio of the Westdeutscher Rundfunk. These results stem from my theoretical work in sound synthesis and music aided by computer, work which employs a different path than that of the classical Fourier harmonic analysis and which I first carried out at Indiana University in Bloomington, then at the Centre d'Etudes de Mathématique et Automatique Musicales (CEMAMu) in Paris. This difference uses stochastic walks and Brownian movements. Indeed, according to this theory that I introduced twelve years ago, one starts from noise and, with the aid of these stochastic functions, periodicities are injected into it. (Cf. Iannis Xenakis, *Formalized Music*, page 242, Indiana University Press, Bloomington, Indiana, U. S. A., 1971, and Iannis Xenakis, *Arts / Sciences Alliances*, page 139, Casterman, Tournai, 1979).

The poetic description of Jacques Lonchampt that follows here gives an idea of the piece.

IANNIS XENAKIS

.... Even more impressive was *Jonchaies* (a commission of Radio-France given in world premiere), score of such a direct accent that it could become quickly almost a «classic». A vast, ultra-rapid unison glissando rises in the strings from the extreme lows to the extreme highs in the middle of storm rumblings, then diversifies into long, supple lines which become superposed in a tissue of marvellous, quasi-tonal harmony, vibrating with great warmth of the bow. Then the scenery changes in a curious episode, accentuated by the off-beat rhythms of the fairground beaten proudly out by the bass drum.

The movement accelerates again, flutes whistle, violons cry out, brasses roar, paroxysm gives way to softness, the rhythms multiply, move out of their patterns, and all this music vibrates and sighs in a sort of plénitude of natural life. An explosive cadenza for solo trombone reawakens the movement that an instant was asleep, setting free the percussions, storms of strings, Homeric brass fanfares, before everything ends up softly with sonorities of tin y bells and bird whistlings...

Jacques Lonchampt - *Le Monde* - December 23 1977

The world premiere of *Jonchaies* took place in Paris by the Orchestre National de France, conducted by Michel Tabachnik, at the concert of December 21, 1977, closing the «CYCLE IANNIS XENAKIS», month-long festival devoted entirely to his music, organized by the «Recherche Artistique» in conjunction with the French Ministry of Culture. From November 28 to December 21, this cycle presented 12 concerts in Paris and 6 others throughout France in which 34 of his works for orchestra, ensemble, solists, and magnetic tape were performed.

COMPOSITION DE L'ORCHESTRE

2 Piccolos
2 Grandes Flûtes
2 Hautbois
2 Cors Anglais
1 Clarinette Mi b
2 Clarinettes Si b
2 Clarinettes basses Si b
1 Clarinette contrebasse Si b
2 Bassons
2 Contrebasses

6 Cors
4 Trompettes en Ut
2 Trombones Ténors
2 Trombones basses et contrebasses
(gamme chromatique complète
à partir du mi)
1 Tuba contrebasse (T U C B)

18 Violons I
16 Violons II
14 Alti
12 Violoncelles
10 Contrebasses

6 Percussionnistes :

1 timbalier avec timbales à pédales, au centre derrière l'orchestre

5 percussionnistes dispersés derrière l'orchestre :

Perc. I : 4 tom-toms échelonnés, 1 xylomarimba, 1 grosse caisse très large

Perc. II : 4 tom-toms échelonnés, 1 vibraphone

Perc. III : 4 tom-toms échelonnés, 1 cymbale suspendue (moyenne)

Perc. IV : 4 tom-toms échelonnés, 1 cymbale suspendue (grande), 1 tam-tam, 10 blocs chinois échelonnés (mais pas forcément en demi-tons)

Perc. V : 1 grosse caisse très large, 1 cymbale suspendue (petite), 1 gong chinois ou 1 tam-tam large

NOTICE POUR L'EXECUTION

1- Durée : environ 17 minutes

2- La notation est en *Ut* sauf pour :
les piccolos, qui sonnent à l'octave ↑
le contrebasson
la clarinette contrebasse } qui sonnent à l'octave ↓
la contrebasse

3- Notation des quarts de tons :



4- Les cordes : dans les *ff* doivent jouer avec des changements d'archets fréquents.

Le son «bridge» noté *zzzz* est un grincement irrégulier, dense à l'oreille sans création de hauteur.

Le son «sul ponticello» doit être riche en harmoniques supérieurs.

Les glissandi se font d'un seul mouvement qui doit être uniforme à l'oreille : la main gauche ralentira le mouvement vers l'aigu et accélérera le mouvement vers le grave.

Les durées des glissandi ou des notes tenues doivent être rigoureusement respectées.

Toutes ces remarques au sujet des glissandi sont valables pour les trombones et leur coulisse.

Les cors, les trompettes et le tuba contrebasse devront s'efforcer de faire de sorte que le résultat du glissando soit, à l'oreille, semblable à celui des cordes et des trombones, en forçant le passage de l'air par le souffle, les lèvres, etc... et en minimisant les sauts discontinus d'une note à l'autre.

5- Les indications métronomiques sont approximatives.

6- Groupement de petits glissandi, mesure 167, etc.

Exemple

Ecriture :



Réalisation pour l'oreille :

Attaquer avec rudesse la première note sans la tenir, car le glissando commence aussitôt.

La petite note n'est qu'effleurée, car elle indique seulement la fin du glissando.

Après chaque petite note ou après chaque tenue qui n'est pas liée à la note suivante, réattaquer la première note du glissando ou de la tenue suivante.

Les notes intermédiaires du glissando en zig-zag n'ont pas de durée ; elles ne sont qu'effleurées.

C'est la ligne brisée qu'il faut faire entendre.

7- A partir de la mesure 10 jusqu'à la mesure 66, les cordes sont divisées en six groupes numérotés I, II, III, IV, V, VI. Chaque groupe est constitué de trois sous-groupes A, B, C.

Les sous-groupes B (médiants) sont joués arco très lié.

Les sous-groupes A jouent la même musique que les sous-groupes B (les premières mesures des sous-groupes A sont écrites explicitement à titre de modèle), mais il ne font qu'effleurer les notes, car ils glissent (sauf aux liaisons) d'une note à l'autre, d'un mouvement continu en respectant les rythmes des sous-groupes B.

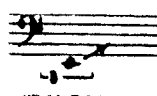
Enfin, les violons des troisièmes sous-groupes C, jouent la même musique que les sous-groupes B avec arco, sauf contre-indication spéciale ; exemple : *V pizz.*, auquel cas ils jouent les mêmes notes que les B mais en pizzicato au lieu de arco. Exception est faite pour les contrebasses qui ne jouent que pizzicato aux endroits où cela est indiqué par la mention *CB pizz.* et jamais arco jusqu'à la mesure 63. Les contrebasses jouent en pizzicato les notes réelles des sous-groupes B correspondants.

Attention ! Aux répartitions des instruments indiqués au fur et à mesure dans la partition.

8- Attention ! Pour tous les instruments : absolument pas de vibrato.

COMPOSITION OF THE ORCHESTRA

2 Piccolos
2 Flutes
2 Oboes
2 English Horns
1st Clarinet in E \flat
2 Clarinets in B \flat
2 Bass Clarinets in B \flat
1 Contrabass Clarinet in B \flat
2 Bassoons
2 Double Bassoons

6 French Horns
4 Trumpets in C
2 Tenor Trombones
2 Bass and Contrabass Trombones
(complete chromatic scale starting from E)

1 Contrabass Tuba (T U C B)

18 Violins I
16 Violins II
14 Violas
12 Violoncelli
10 Double Basses

6 percussionists :

1 timpanist with timpani with pedals, in the center behind the orchestra

5 percussionists dispersed behind the orchestra :

Perc. I : 4 scaled tom-toms, 1 xylomarmba, 1 very large bass drum

Perc. II : 4 scaled tom-toms, 1 vibraphone

Perc. III : 4 scaled tom-toms, 1 suspended cymbal (medium)

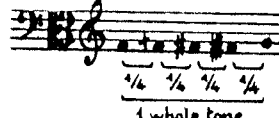
Perc. IV : 4 scaled tom-toms, 1 suspended cymbal (large), 1 tam-tam, 10 scaled Chinese blocks (but not necessarily in half-steps)


Perc. V : 1 very large bass drum, 1 suspended cymbal (small), 1 chinese gong or 1 large tam-tam


PERFORMANCE NOTES

1- Duration : circa 17 minutes

2- The score is written in C except for : the piccolos which sound 1 octave \uparrow
the double bassoon
the contrabass clarinet
the double bass } which sound one octave \downarrow

3- Notation for the quarter tones: 

4- The strings : in the  they should play with frequent changes of bow.

The «bridge» sound noted  is an irregular, dense, grinding sound, without giving an impression of pitch.

The «sul ponticello» sound must be rich in upper harmonics.

The glissandi are performed in a single movement which must be uniform to the ear : the left hand will slow down the movement towards the upper register and accelerate it towards the lower.

The durations of the glissandi or of the held notes must be strictly observed.

All these remarks about the glissandi apply equally to the trombones and their slides.

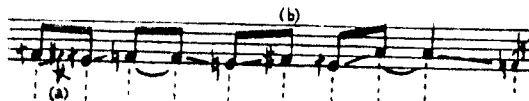
The french horns, trumpets, and the contrabass tuba must ensure that the result is, for the ear, similar to that of the strings and trombones, by forcing the air passage with the breath, the lips, etc., and by minimizing the discontinuity of the jumps from one note to the next.

5- The metronomic indications are approximative.

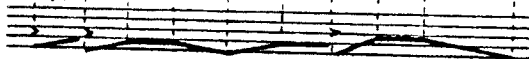
6- Groupings of short glissandi, bar 167, etc.

Example :

notation :



execution for the ear :



Attack the first note with roughness without holding it, for the glissando starts at once.

The small note is only touched upon, since it indicates merely the end of the glissando.

After each small or held note which is not tied to the following note, make a fresh attack on the first note of the following glissando or on the next held note. (a) (b)



The intermediate notes of the zig-zagging glissando have no duration ; they are only touched upon.

It is the broken line which should be heard.

7- From bar 10 until bar 66, the strings are divided into six groups numbered I, II, III, IV, V, VI. Each group consists of three subgroups A, B, C

The B subgroups (in the middle) are played arco, molto legato.

The A subgroups play the same music as the B subgroups (the first few bars of the A subgroups are explicitly given as a model), but they merely touch upon the notes as they make the glissandi (except for the slurs) from one note to the next, in one continuous movement, observing the rhythms of the B subgroups.

Finally the violins of the C subgroups play arco the same music as do the B subgroups, unless otherwise indicated ; example : , in which case they play the same notes as the B subgroups but pizzicato instead of arco. The double basses are an exceptions as they only play pizzicato where this is indicated by the mention  and never arco until bar 63. The double basses play pizzicato the real pitches (as heard) of the corresponding B subgroups.

Attention ! to the distribution of the instruments as the score proceeds.

8- Attention ! for all instruments : absolutely no vibrato anywhere.

Reproduction
du
manuscrit de l'auteur.

I. XENAKIS

Handwritten musical score for guitar, featuring multiple staves with notes, chords, and performance instructions. The score includes various annotations such as "VI(56)A10, VC6", "VI(9,12)CB7", "VII(5,6), A8, VC10", etc., indicating specific measures or techniques. The notation includes standard musical symbols like treble clefs, time signatures, and dynamic markings.

The score is organized into systems, each containing one or more staves. The first staff of each system typically contains a measure number and a key signature or tempo marking. Subsequent staves contain musical notation, often with fingerings indicated by numbers 1-4. Performance instructions are written below the staves, such as "COMME A du groupe I", "COMME B du groupe II", "COMME C du groupe III", etc.

The score concludes with a final measure marked "X".

14

16

18

22

22

3

26

I A V, A, VC

I B

I C V pizz

II A A, VC

II B

II C CB pizz

III A V, A, VC

III B

III C V pizz

IV A V, A, VC

IV B

IV C V pizz

V A V, A, VC

V B

V C V pizz

VI A V, A, VC

VI B

VI C V pizz

Blas chinés
Perc. IV

une dizaine si possible échelonnées
mais pas nécessairement chromatiques
sinon faire des reprises.

bag. dures

mp

26

27

29

30

I A V, A, VC

I B

I C V pizz

II A A, VC

II B

II C CB pizz

III A A, VC

III B

III C CB pizz

IV A A, VC

IV B

IV C CB pizz

V A V, A, VC

V B

V C V pizz

VI A V, A, VC

VI B

VI C V pizz

Timbales

mp

mf crescendo poco à poco

mf crescendo poco à poco

mf crescendo poco à poco

(4)

30

32

33

34

Handwritten musical score for six staves (I to VI). Each staff has three parts: A, B, and C. The notation includes various musical symbols, including notes, rests, and dynamic markings. Key markings include:

- Staff I:** A: VC, A, VC; B: VC, A, VC; C: CB pizz, crescendo poco a poco, V, A, VC.
- Staff II:** A: VC, A, VC; B: VC, A, VC; C: CB pizz, V pizz.
- Staff III:** A: VC, A, VC; B: VC, A, VC; C: CB pizz, V pizz.
- Staff IV:** A: VC, A, VC; B: VC, A, VC; C: CB pizz, V pizz.
- Staff V:** A: VC, A, VC; B: VC, A, VC; C: CB pizz, V pizz.
- Staff VI:** A: VC, A, VC; B: VC, A, VC; C: CB pizz, V pizz.

34

36

Handwritten musical score for six staves (I to VI). Each staff has three parts: A, B, and C. The notation includes various musical symbols, including notes, rests, and dynamic markings. Key markings include:

- Staff I:** A: VC, A, VC; B: VC, A, VC; C: CB pizz, sempre cresc., V, A, VC.
- Staff II:** A: VC, A, VC; B: VC, A, VC; C: CB pizz, sempre cresc., V, A, VC.
- Staff III:** A: VC, A, VC; B: VC, A, VC; C: CB pizz, sempre cresc., V, A, VC.
- Staff IV:** A: VC, A, VC; B: VC, A, VC; C: CB pizz, sempre cresc., V, A, VC.
- Staff V:** A: VC, A, VC; B: VC, A, VC; C: CB pizz, sempre cresc., V, A, VC.
- Staff VI:** A: VC, A, VC; B: VC, A, VC; C: CB pizz, sempre cresc., V, A, VC.

Handwritten musical score for six string quartets (I-VI), each with Violin (V), Viola (A), and Violoncello (VC) parts. The score is divided into measures 38, 40, and 42. The notation includes various musical symbols such as notes, rests, and dynamic markings. Performance instructions are written above and below the staves, including *V.A.VC*, *V pizz*, *V arco*, and *V.A.VC*. The score is written in a system of six staves, with each quartet represented by a single staff.

Handwritten musical score for six string quartets (I-VI), each with Violin (V), Viola (A), and Violoncello (VC) parts. The score is divided into measures 42, 44, and 46. The notation includes various musical symbols such as notes, rests, and dynamic markings. Performance instructions are written above and below the staves, including *V.A.VC*, *V pizz*, *V arco*, and *V.A.VC*. The score is written in a system of six staves, with each quartet represented by a single staff.

Caisse Perc.Y

matraques douces roulement irrégulier et saccadé

pp

⑥

46

48

50

Handwritten musical score for six staves (I to VI), each with three parts (A, B, C). The score includes various musical notations, including notes, rests, and dynamic markings. Key markings include:

- Staff I:** A: $\rightarrow V, A, VC \rightarrow$; B: $\rightarrow V, A, VC \rightarrow$; C: $\rightarrow V, pizz \rightarrow$; $\rightarrow \# \rightarrow$ sempre cresc. \rightarrow
- Staff II:** A: $\rightarrow V, A \rightarrow$; B: $\rightarrow V, A \rightarrow$; C: $\rightarrow V, arco \rightarrow$; $\rightarrow \# \rightarrow$ sempre cresc. \rightarrow
- Staff III:** A: $\rightarrow V, A \rightarrow$; B: $\rightarrow V, A \rightarrow$; C: $\rightarrow V, arco \rightarrow$; $\rightarrow \# \rightarrow$ sempre cresc. \rightarrow
- Staff IV:** A: $\rightarrow V, A \rightarrow$; B: $\rightarrow V, A \rightarrow$; C: $\rightarrow V, arco \rightarrow$; $\rightarrow \# \rightarrow$ sempre cresc. \rightarrow
- Staff V:** A: $\rightarrow V, A, VC \rightarrow$; B: $\rightarrow V, A, VC \rightarrow$; C: $\rightarrow V, pizz \rightarrow$; $\rightarrow \# \rightarrow$ sempre cresc. \rightarrow
- Staff VI:** A: $\rightarrow V, A, VC \rightarrow$; B: $\rightarrow V, A, VC \rightarrow$; C: $\rightarrow V, pizz \rightarrow$; $\rightarrow \# \rightarrow$ sempre cresc. \rightarrow

50

52

54

Handwritten musical score for six staves (I to VI), each with three parts (A, B, C). The score includes various musical notations, including notes, rests, and dynamic markings. Key markings include:

- Staff I:** A: $\rightarrow V, A, VC \rightarrow$; B: $\rightarrow V, A, VC \rightarrow$; C: $\rightarrow V, pizz \rightarrow$; $\rightarrow \# \rightarrow$ sempre cresc. \rightarrow
- Staff II:** A: $\rightarrow V, A \rightarrow$; B: $\rightarrow V, A \rightarrow$; C: $\rightarrow V, arco \rightarrow$; $\rightarrow \# \rightarrow$ sempre cresc. \rightarrow
- Staff III:** A: $\rightarrow V, A \rightarrow$; B: $\rightarrow V, A \rightarrow$; C: $\rightarrow V, arco \rightarrow$; $\rightarrow \# \rightarrow$ sempre cresc. \rightarrow
- Staff IV:** A: $\rightarrow V, A \rightarrow$; B: $\rightarrow V, A \rightarrow$; C: $\rightarrow V, arco \rightarrow$; $\rightarrow \# \rightarrow$ sempre cresc. \rightarrow
- Staff V:** A: $\rightarrow V, A, VC \rightarrow$; B: $\rightarrow V, A, VC \rightarrow$; C: $\rightarrow V, pizz \rightarrow$; $\rightarrow \# \rightarrow$ sempre cresc. \rightarrow
- Staff VI:** A: $\rightarrow V, A, VC \rightarrow$; B: $\rightarrow V, A, VC \rightarrow$; C: $\rightarrow V, pizz \rightarrow$; $\rightarrow \# \rightarrow$ sempre cresc. \rightarrow

Handwritten musical score for measures 54 to 58. The score is organized into systems for six string sections (I-VI), each with parts A, B, and C. Measure numbers 54, 56, and 58 are indicated at the top of the systems. Performance instructions are written above the staves, including *V, A*, *V arco*, *V, A, VC*, *V pizz*, and *V, A, VC*. The notation includes various musical symbols such as notes, rests, and dynamic markings.

Handwritten musical score for measures 60 to 62. The score continues the six string sections (I-VI) with parts A, B, and C. Measure numbers 60 and 62 are indicated at the top. Performance instructions include *V, A, VC*, *A, VC*, *V pizz*, *CB pizz*, and *V, A, VC*. The notation includes various musical symbols such as notes, rests, and dynamic markings. At the bottom left, the word "Timbale" is written. At the bottom right, there are dynamic markings: *pp*, *f*, and *pp*.

==

Handwritten musical score for "The Song of the Lark" by Gustav Mahler, measures 66-71. The score includes staves for strings (Fg, Cg, TAD, P.I., TMB, P.C., T.C.B.), woodwinds (VI, VII, A, VC), and percussion (T.V.). The music is in 4/4 time and features a complex, rhythmic melody. The score is handwritten and includes various performance markings such as "arco non legato, molto lento" and "pizz".

Handwritten musical score for a percussion ensemble, measures 71-76. The score includes parts for Timpani (Tica), Snare Drum (Fl), Cymbals (Cl Basso), Congas (CF 1/2 + Fg 1/2), Tom-toms (Tb Basso), Tubas (TUBO), 4 Percussion Toms (4 Perc Toms), Triangle (TIMB), Gong (G.A.C.), Viola (VI), and Cello (CB). The score is written on a grand staff with various musical notations including dynamics (p, cresc., decresc.), articulation (acc.), and performance instructions (pizz). The tempo is marked 71-76. The score is handwritten and shows signs of being a working draft.

Handwritten musical score for "L'Espresso" by Luciano Berio. The score is for a large ensemble, including woodwinds, brass, strings, and percussion. It features complex rhythmic patterns, dynamic markings, and articulation. The score is divided into measures, with some measures containing multiple staves for different instruments. The tempo is marked "Allegro" and the time signature is 4/4. The score is handwritten in black ink on white paper.

[illegible]

②

Handwritten musical score for a large ensemble, spanning measures 91 to 96. The score is organized into systems, with measures 91, 93, 94, and 96 marked at the top. The instruments and parts are listed on the left side of the page:

- Picc.
- R.
- Clara.
- Fg 1
- Cf 2
- 1st Toms
- CE Mb
- CE sb
- Hb
- CA
- Fg 2
- Cf 1
- 2nd Toms
- CE sb
- C 1
- Trp
- C 2
- C 3
- C 4
- C 5
- C 6
- TRBB
- TUCB
- 3rd Toms
- Timb
- Gr.C. (perc. 8)
- V
- A
- VC
- CB
- 4th Toms

The score includes various musical notations such as notes, rests, and dynamic markings (e.g., *simile*, *f*, *mf*). The notation is dense, with many notes and rests written across the staves. The page is numbered 96 in the top right corner.

Handwritten musical score for a large ensemble, spanning measures 96 to 101. The score is organized into systems, with measures 96, 98, and 99 marked at the top. The instruments and parts listed on the left include:

- Pia (Piano)
- FR (French Horn)
- CEB (Cello/Double Bass)
- Fg (Flute)
- CEg (Clarinet)
- 1st Trm (Trumpet)
- CEB (Cello/Double Bass)
- CEB (Cello/Double Bass)
- HB (Horn)
- CA (Clarinet)
- Fg (Flute)
- CEg (Clarinet)
- 2nd Trm (Trumpet)
- CEB (Cello/Double Bass)
- C1 (Clarinet)
- TRP (Trumpet)
- C2 (Clarinet)
- C3 (Clarinet)
- C4 (Clarinet)
- C5 (Clarinet)
- C6 (Clarinet)
- 3rd Trm (Trumpet)
- TRP2 (Trumpet)
- TRB1 (Trumpet)
- TRP3 (Trumpet)
- TRB2 (Trumpet)
- TRP4 (Trumpet)
- TRB3 (Trumpet)
- TRBB1 (Trumpet)
- TUCB (Tuba)
- Timb (Timpani)
- V (Violin)
- A (Viola)
- VC (Violoncello)
- CB (Cello/Double Bass)
- 1st Trm (Trumpet)

The score features complex rhythmic patterns, including triplets and sixteenth notes, and includes various musical notations such as slurs, ties, and dynamic markings. The notation is dense and detailed, typical of a professional orchestral score.

Handwritten musical score for a large ensemble, featuring multiple staves and instruments. The score is written in a system with 16 staves, each containing a different instrument or section. The notation includes various musical symbols, including notes, rests, and dynamic markings. The instruments listed on the left side of the staves are:

- Pia
- FC
- CE. Bap.
- Fg
- C. Fg
- 1st Toms
- CE. Mib
- CE. 1st
- HC
- CA
- Fg 2
- C. Fg 1
- 2nd Toms
- CE. 2nd
- C
- TRP 1
- C 2
- C 3
- C 4
- C 5
- C 6
- 3rd Toms
- TRP 2
- TRB 1
- TRP 3
- TRB 2
- TRP 4
- TRBB 2
- TRBB 1
- TVCB
- Timb
- V
- A
- VC
- CB
- 4th Toms

The score is written in a system with 16 staves, each containing a different instrument or section. The notation includes various musical symbols, including notes, rests, and dynamic markings. The instruments listed on the left side of the staves are:

Handwritten musical score for a large ensemble, featuring multiple staves with musical notation, including notes, rests, and dynamic markings. The score is organized into systems, with measures numbered 100, 105, and 110. The instruments listed on the left include:

- Top
- Ric
- Fl
- CR
- Fg
- CR
- 1st Trm
- CE
- CE
- HE
- CA
- Fg
- CR
- 2nd Trm
- CE
- C
- TRP
- C
- C
- 3rd Trm
- TRP
- TRB
- TRP
- TRB
- TRP
- TRB
- TUCB
- Timb
- V
- A
- VC
- CB
- 4th Trm

Dynamic markings such as *f* (forte) and *p* (piano) are present. The score is written in a standard musical notation style, with notes, rests, and other musical symbols clearly visible.

ritardando
Tutti
sotto voce

(fff)

p

Handwritten musical score for orchestra and voices. The score is divided into measures 112, 115, and 116. The instruments and parts are listed on the left side of the page:

- III
- Pi.
- FC
- Cl. Bass
- Fg
- Clf2
- 1st Perc. Toms
- Cl. Hrb
- Cl. Hrb
- Hrb
- CA
- Fg2
- Clf1
- 2nd Perc. Toms
- Cl. Hrb
- C
- TP1
- C2
- C3
- C4
- C5
- C6
- 3rd Perc. Toms
- TP2
- TB1
- TP3
- TB2
- TP4
- TBB1
- TBB2
- TUCB
- Timb
- V
- A
- VC
- CB
- 4th Perc. Toms

The score includes various musical notations such as notes, rests, and dynamic markings. The measures are numbered 112, 115, and 116.

Handwritten musical score for orchestra, measures 116 to 121. The score includes staves for various instruments and sections, with dynamic markings and performance instructions.

Measures: 116, 117, 118, 120, 121

Instrumentation and Sections:

- Pic (Piccolo)
- Fl (Flute)
- CEB (Corno in E-flat)
- Fg (Fagotto)
- 1^{re} Perc (1st Percussion)
- CEH (Corno in E)
- CEB (Corno in E-flat)
- HB (Horn in B-flat)
- CA (Clarinete Alto)
- Fg2 (Fagotto 2)
- CEB (Corno in E-flat)
- 2^e Perc (2nd Percussion)
- CEB (Corno in E-flat)
- C1 (Clarinete 1)
- TP1 (Trompe 1)
- C2 (Clarinete 2)
- C3 (Clarinete 3)
- C4 (Clarinete 4)
- C5 (Clarinete 5)
- C6 (Clarinete 6)
- 3^e Perc (3rd Percussion)
- TP2 (Trompe 2)
- TB1 (Trombone 1)
- TP3 (Trompe 3)
- TB2 (Trombone 2)
- TP4 (Trompe 4)
- TBB2 (Trombone 2)
- TBB1 (Trombone 1)
- TUCB (Trombone in C)
- Timb (Timpani)
- V (Violon)
- A (Viola)
- VC (Violoncelle)
- CB (Contrebasse)
- 4^e Perc (4th Percussion)
- L'orchestre (The Orchestra)
- Tutti sauf perc uss. (Tutti except percussion)

Dynamic Markings: *pp* (pianissimo), *ff* (fortissimo)

Performance Instructions: *L'orchestre Tutti sauf perc uss.*

Orchestra?
Tutti (sarf)
per

ppp subito gr. 1, 2^a, sc. cf. c-dessa^r

126

Stacc. Count →
partout

85.7 65.5 65.5 65.5 130 75.5 131

CE 5/2
C1
TP1
C2
C3
C4
C5
C6

Tutti →

TP2
TB1
TP3
TB2
TP4
TB3
TB4
TUCB

4 perc. Toms
(P.B.) Gr. C.
Timp

pp Ind. percuss. cresc →

75.0 75.0 15:1 55.4 55.4 55.4 11.1

131

75.5 75.4 55.4 55.4 95.0 134 65.5 35.2 136

CE 5/2
C1
TP1
C2
C3
C4
C5
C6

Tutti →

TP2
TB1
TP3
TB2
TP4
TB3
TB4
TUCB

4 perc. Toms
(P.B.) Gr. C.
Timp

(f) cresc →

35.2 35.2 35.2 15.1 75.6 75.0 15:1

→ # (#) dimin. →

141 142 145 146

4 perc. timb.
G.C. (S)
Timb.
Perc. tutti pp

Picc.
Fl.
Cl. basse
Fg 1
Cf 2
V.
A.
VC.
CB

tous les bois:
osciller lentement,
autour de la
note écrite, d'un
ambitus d'un ton et demi
environ, en glissant;
respirer librement mais pas
simultanément.
l'intensité autour de ff.

Tous sauf les CB:
gliss + trille avec un ton supérieur →

gl. + trille

dimin →

f dim →

pp

146 (4e) 150 151

Picc.
R.
Cl. Basse
Fg 1
Cf 2
Cl. Alt.
HB
CA
Fg 2
Cf 1
4 Perc. Timb.
G.C. (S)
Timb.
Perc. Tutti pp

gliss + trille avec un ton supérieur →

osciller lentement autour de la note écrite, d'un ambitus d'un ton et demi environ, en glissant; respirer librement mais pas simultanément. varier lentement l'intensité autour de ff.

tutti →

gliss + trille avec un ton supérieur →

tutti →

pp

dimin →

f

ff

f

ff

(ff)

pp

752

154

156

[illegible]

Handwritten musical score for measures 156 to 160. The score includes staves for various instruments and voices, with dynamic markings and performance instructions.

Measures 156, 158, 160.

Instruments and parts shown:

- C1, C2, C3, C4, C5, C6
- TP1, TP2, TP3, TP4
- TB1, TB2, TB3, TB4
- VC (Violoncelle)
- CB (Contrebasse)
- 4 Perc. Trum. G.C. (4 Percussion Trumpets G.C.)
- Timb. (Timpani)
- CondaTutti (Conductors/Tutti)

Dynamic markings: *pp*, *f*, *ppp*.

Performance instructions: "CB seules", "gliss. + trille avec un ton supérieur".

Handwritten musical score for measures 161 to 166. The score includes staves for various instruments and voices, with dynamic markings and performance instructions.

Measures 161, 165, 166.

Instruments and parts shown:

- C1, C2, C3, C4, C5, C6
- TP1, TP2, TP3, TP4
- TB1, TB2, TB3, TB4
- VC (Violoncelle)
- CB (Contrebasse)
- 4 Perc. Trum. G.C. (4 Percussion Trumpets G.C.)
- Timb. (Timpani)
- Tutti (Tutti)

Dynamic markings: *pp*, *f*, *ppp*, *cresc.*

Performance instructions: "Pour tout le groupe: osciller lentement autour de la note écrite, d'un ambitus d'un ton et demi environ, en glissant; respirer librement mais pas simultanément.", "gliss. + trille avec un ton supérieur", "(gl. + tr.)", "(CB)".

Handwritten musical score for orchestra and voices, measures 166-171. The score is written on multiple staves. The top staves are for voices: CE MIB, CE. 2b, HB (1 and 2), CA (1 and 2), and CFg. The middle staves are for strings: C1, C2, C3, C4, C5, and C6. The bottom staves are for woodwinds and percussion: TP2, TB1, TP3, TB2, TP4, TBB2, TBB1, TUCB, G.C. (pauce), Timb, V (1 and 2), A, VC, and CB. The score includes various musical notations such as notes, rests, and dynamic markings (p, pp, mf, ff). There are also handwritten annotations in French, including "comme la précédente réalisation" and "5/4". The page number 169 is written in the top right corner.

171 175 176

Orch. 1
Orch. 2
HB 1
HB 2
CA 1
CA 2
Fg 2
Cf 2
C 1
C 2
C 3
C 4
C 5
C 6
TP 1
TP 2
TP 3
TP 4
TB 1
TB 2
TBB 1
TBB 2
TVCB

Handwritten musical score for a large ensemble, spanning measures 176 to 179. The score includes parts for Piccolo (Picc.), Flute (Fl.), Clarinet in B-flat (Cl. Bb.), Flute in G (Fl. G), Clarinet in F (Cl. F), Clarinet in E-flat (Cl. Eb), Horn in B-flat (H. Bb.), Clarinet in A (Cl. A), Flute in C (Fl. C), Clarinet in B-flat (Cl. Bb.), Trumpet (Tp.), Trombone (Tb.), and Tuba (Tb.). The score features complex rhythmic patterns, including sixteenth and thirty-second notes, and dynamic markings such as *f*, *pp*, and *ff*. A section of the score is marked "C" and includes a "Crescendo" marking. The bottom of the page includes the text "Ganglianos de Tarragona (pau. 17)" and "Les Trombones (pp)".

$\downarrow \approx 48 \text{ HH}$ -

181

182

180

Handwritten musical score for measures 181 and 182. The score includes staves for TB1, TB2, and TBB. Measure 181 features a melodic line in TB1 and TB2, with a TBB part below. Measure 182 continues the melodic development. Handwritten annotations include "mottet sound", "sounding", "mottet sound", "mottet sound", and "mottet sound". A dynamic marking of *mf* is present. A bracket indicates "Sauf TB1".

186

188

189

191

Handwritten musical score for measures 186 through 191. The score includes staves for C (Cello), TP (Trumpet), TB (Trombone), and TBB (Tubist). Measure 186 shows the beginning of a section with C, TP, TB, and TBB parts. Measures 188 and 189 continue the melodic and harmonic development. Measure 191 concludes the section. The score is densely written with many notes and rests.

191

$(\lambda = 48 \text{ nm}) \rightarrow \text{accélérer}$
193

 $\hat{a} = 52 \text{ mm}$

96

Handwritten musical score for orchestra and choir, spanning measures 193 to 196. The score includes parts for Piccolo (Pic), Flute (Fl), Clarinet in B-flat (Cl. Bb.), Flute in C (Fl. 1), Clarinet in F (Cl. F.), Horn in B-flat (Hb.), Clarinet in A (Cl. A.), Flute in D (Fl. 2), Clarinet in B-flat (Cl. Bb. 2), Horn in C (Hc.), Flute in E-flat (Fl. 3), Clarinet in B-flat (Cl. Bb. 3), Trumpet (Tp.), Trombone (Tb.), Tuba (Tub.), Bass Trombone (Tbb.), Timpani (Timp.), Snare Drum (Grosse Caisse), and various strings (Violins I, Violins II, Violas, Cellos, Double Basses). The score is written in French and includes performance instructions such as "fluctuations lentes de ± 2 tons" and "Tous cuivres (+) #". The page number 196 is visible in the top right corner.

Handwritten musical score for orchestra and choir, spanning measures 196 to 201. The score includes parts for various instruments and vocal groups.

Instrumental Parts:

- Pia (Piano)
- FR (Flute)
- Cl Basso (Clarinet Basso)
- Fg 1 (Flute 1)
- CFg 2 (Clarinet Flute 2)
- Cl Mid (Clarinet Middle)
- Cl Sib (Clarinet Soprano)
- HB (Horn B)
- CA (Cornet A)
- Fg 2 (Flute 2)
- CFg 1 (Clarinet Flute 1)
- C (Cello)
- TB 1, 2 (Trombone 1, 2)
- TBB 1, 2 (Trombone Bass 1, 2)
- TUCB (Trombone Upper Cello Bass)
- Toms (Toms)
- Timb (Timpani)
- V (Violin)
- A (Viola)
- VC (Violoncello)
- CB (Contrabass)

Measure Numbers: 196, 199, 200, 201

Performance Markings:

- same sound* (written above TB 1, 2 and TBB 1, 2)
- ppp* (pianissimo)
- simile* (written above V, A, VC, CB)
- 6F:4* (written above V, A, VC, CB)
- 1F:1* (written above V, A, VC, CB)
- pp* (piano)

The score is written on multiple staves, with some parts (Pia, FR, Cl Basso, Fg 1, CFg 2, Cl Mid, Cl Sib, HB, CA, Fg 2, CFg 1) appearing as empty staves, suggesting they are not active in this section. The active parts (C, TB, TBB, TUCB, Toms, Timb, V, A, VC, CB) show complex rhythmic patterns and dynamics.

Handwritten musical score for measures 201, 202, and 203. The score includes staves for various instruments and vocal parts, with handwritten annotations and performance instructions.

Measures 201, 202, 203

Instrumentation:

- Cl. Basso
- Fg. 1
- Cf. 1
- Cord. 1
- TRB. 1
- TRB. 2
- TVCB
- Toms (1st, 2nd, 3rd, 4th)
- Timb.
- V. 1, 2, 3, 4, 5, 6
- A. 1, 2
- VC 1, 2
- CB 1, 2

Handwritten Annotations:

- hcs ses, angle* (written vertically on the left margin)
- Tout les percussions* (written below the Tombs staff)
- Tout les cordes* (written below the VC and CB staves)
- pointe collo* (written above the V. 1 staff)
- (pont) position normale* (written above the V. 1 staff)

Performance Instructions:

- pp* (pianissimo)
- ff* (fortissimo)
- mf* (mezzo-forte)
- f* (forte)

Other markings:

- Measure numbers: 201, 202, 203
- Staff numbers: 1, 2, 3, 4, 5, 6, 1, 2, 1, 2
- Rehearsal marks: $\#$

206 207 209 211

1^{re}
2^e
3^e
4^e

Timb

V

1
2
3
4
5
6

A

1
2

VC

1
2

CB

1
2

Tutti
Cordes

pp

[Toutes les cordes] (norm) ponticello "mystique" pont. + tremolo rapide position norm. sans tremolo

216

Y

1
2
3
4
5
6

A

1
2

VC
(4 groupes)
pau

1
2
3
4

CB

(1-2)
(3-5)
(6-7)
(8-10)

(Cordes)
Tutti

pp

divisi

Handwritten musical score for a symphony orchestra, spanning measures 216 to 221. The score is written on multiple staves, including Piccolo (Pic), Flute (Fl), Horns (HB), Clarinets (CL), Bassoon (B), Fagot (Fg), Contrabassoon (Cb), Cymbals (Cym), Tom-toms (Tom), Violins (V), Viola (A), Violoncello (VC), and Double Bass (CB). The score includes various musical notations such as notes, rests, and dynamic markings. Key annotations include:

- Measure 216: *216 (L52MM) -> accel.*
- Measure 217: *217 l=60MM*
- Measure 218: *218*
- Measure 220: *220*
- Measure 221: *221*

The score is written in French, with instructions such as "Les tremolos au flauto, très saccés" (The tremolos on the flute, very staccato) and "au bien en stacc. très rapides." (very fast in staccato). The score is marked with "stacc." and "très rapides." indicating the tempo and articulation. The score is written in French, with instructions such as "Les tremolos au flauto, très saccés" (The tremolos on the flute, very staccato) and "au bien en stacc. très rapides." (very fast in staccato). The score is marked with "stacc." and "très rapides." indicating the tempo and articulation.

Handwritten musical score for a large orchestra, numbered 226 and 228. The score includes staves for various instruments: Flute (Fl.), Piccolo (Pic.), Oboe (Ob.), Clarinet in B-flat (Cl. Bb.), Clarinet in E-flat (Cl. Eb.), Bassoon (Fg.), Contrabassoon (Cb.), Horns (Hr.), Trumpets (Tp.), Trombones (Trb.), Tuba (Tub.), Timpani (Timb.), Cymbals (Cym.), Xylophone (Xym.), Vibraphone (Vib.), and Percussion (Perc.). The score is written in a complex, handwritten style with many notes, rests, and dynamic markings. A large section of the score is marked with a large 'X' and the text "fluctuations irrégulières de la hauteur, avec lentes ± 2 tons". The score is numbered 226 and 228. The page number 231 is visible in the top right corner.

233 235 236

Picc

Fl

CE H7b

CE 57b

Op. Bam. 1, 2

Fg 1, 2

Cfg 1, 2

C 1, 3, 5

2, 4, 6

TRB 1, 2

TBB 1, 2

TVCB

Timb

Xym (X)

Vibr (X)

V 1

2

A 1

2

Groupe

Vc 1

2

CB 1

2

(fluctuations imprévisibles, avec lentes, de la hauteur & du son)

236

238

240

241

Picc